

## CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

**25.212 CR 048**

Current Version: **3.1.1**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **RAN#7**  
list expected approval meeting # here  
↑

for approval   
for information

strategic   
non-strategic  (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

**Proposed change affects:**  
(at least one should be marked with an X)

(U)SIM  ME  UTRAN / Radio  Core Network

**Source:**

Siemens

**Date:**

2000-02-21

**Subject:**

Mapping of TFCI in downlink compressed mode

**Work item:**

**Category:**

(only one category shall be marked with an X)

F Correction   
A Corresponds to a correction in an earlier release   
B Addition of feature   
C Functional modification of feature   
D Editorial modification

**Release:**

Phase 2   
Release 96   
Release 97   
Release 98   
Release 99   
Release 00

**Reason for change:**

Comment noting that case of transmission gap split between two frames was not adequately specified by existing text. The existing formulae did not give correct results when  $N_{\text{first}}$  occurred in the frame previous to the calculation.

**Clauses affected:**

4.3.5.2.2

**Other specs affected:**

Other 3G core specifications  → List of CRs:  
Other GSM core specifications  → List of CRs:  
MS test specifications  → List of CRs:  
BSS test specifications  → List of CRs:  
O&M specifications  → List of CRs:

**Other comments:**



help.doc

<----- double-click here for help and instructions on how to create a CR.

#### 4.3.5.2.2 Downlink compressed mode

For downlink compressed mode, the slot format is changed so that no TFCI bits are lost. The different slot formats in compressed mode do not match the exact number of TFCI bits for all possible TGLs. DTX is therefore used if the number of TFCI fields exceeds the number of TFCI bits. The block of fields, where DTX is used, starts on the first field after the gap. If there are fewer TFCI fields after the gap than DTX bits, the last fields before of the gap are also filled with DTX.

Denote the number of bits available in the TFCI fields of one compressed radio frame by  $D$  and the number of bits in the TFCI field in a slot by  $N_{TFCI}$ . Denote by  $E$  the first bit to be repeated,  ~~$E = N_{first} N_{TFCI}$~~ .

$$E = N_{first} N_{TFCI}, \text{ if } N_{first} + TGL \leq 15, \text{ else } E = 0$$

If ~~the transmission gap does not extend to the end of the frame~~  $N_{last} \neq 14$ , then  $E$  corresponds to the number of the first TFCI bit in the slot directly after the TG. Denote the total number of TFCI bits to be transmitted by  $N_{tot}$ . If  $SF \geq 128$  then  $N_{tot} = 32$ , else  $N_{tot} = 128$ . The following relations then define the mapping:

$$d_k = b_{(k \bmod 32)}$$

where  $k = 0, 1, 2, \dots, \min(E, N_{tot}) - 1$  and, if  $E < N_{tot}$ ,

$$d_{k+D-N_{tot}} = b_{(k \bmod 32)}$$

where  $k = E, \dots, N_{tot} - 1$ .

DTX bits are sent on  $d_k$  where  $k = \min(E, N_{tot}), \dots, \min(E, N_{tot}) + D - N_{tot} - 1$ .